ATGGAGAGCAAGGTGCTGCTGGCCGTCGCCCTGTGGCTCTGCGTGGAGACCC
GGGCCGCCTCTGTGGGTTTGCCTAGTGTTTCTCTTGATCTGCCCAGGCTCAGCA
TACAAAAAGACATACTTACAATTAAGGCTAATACAACTCTTCAAATTACTTGCAG
GGGACAGAGGGACTTGGACTGGCTTTGGCCCAATAATCAGAGTGGCAGTGAG
CAAAGGGTGGAGGTGACTGAGTGCAGCGATGGCCTCTTCTGTAAGACACTCAC
AATTCCAAAAGTGATCGGAAATGACACTGGAGCCTACAAGTGCTTCTACCGGG
AAACTGACTTGGCCTCGGTCATTTATGTCTATGTTCAAGATTACAGATCTCCATT
TATTGCTTCTGTTAGTGACCAACATGGAGTCGTGTACATTACTGAGAACAAAAA
CAAAACTGTGGTGATTCCATGTCTCGGGTCCATTTCAAATCTCAACGTGTCACTT
TGTGCAAGATACCCAGAAAAGAGATTTGTTCCTGATGGTAACAGAATTTCCTGG
GACAGCAAGAAGGGCTTTACTATTCCCAGCTAGATGATCAGCTATGCTGGCATG
GTCTTCTGTGAAGCAAAAATTAATGATGAAAGTTACCAGTCTATTATGTACATAG
TTGTCGTTGTAGGGTATAGGATTTATGATGTGGTTCTGAGTCCGTCTCATGGAA
TTGAACTATCTGTTGGAGAAAAGCTTGTCTTAAATTGTACAGCAAGAACTGAAC
TAAATGTGGGGATTGACTTCAACTGGGAATACCCTTCTTCGAAGCATCAGCATA
AGAAACTTGTAAACCGAGACCTAAAAACCCAGTCTGGGAGTGAGATGAAGAAA
TTTTTGAGCACCTTAACTATAGATGGTGTAACCCGGAGTGACCAAGGATTGTAC
ACCTGTGCAGCATCCAGTGGGCTGATGACCAAGAAGAACAGCACATTTGTCAG
GGTCCATGAAAAACCTTTTGTTGCTTTTGGAAGTGGCATGGAATCTCTGGTGGA
AGCCACGGTGGGGGAGCGTGTCAGAATCCCTGCGAAGTACCTTGGTTACCCAC
CCCCAGAAATAAAATGGTATAAAAATGGAATACCCCTTGAGTCCAATCACACAA
TTAAAGCGGGGCATGTACTGACGATTATGGAAGTGAGTGAAAGAGACACAGGA
AATTACACTGTCATCCTTACCAATCCCATTTCAAAGGAGAAGCAGAGCCATGTG
GTCTCTCTGGTTGTGTATGTCCCACCCCAGATTGGTGAGAAATCTCTAATCTCTC
CTGTGGATTCCTACCAGTACGGCACCACTCAAACGCTGACATGTACGGTCTATG
CCATTCCTCCCCCCGCATCACATCCACTGGTATTGGCAGTTGGAGGAAGAGTGC
GCCAACGAGCCCAGCCAAGCTGTCTCAGTGACAAACCCATACCCTTGTGAAGA
ATGGAGAAGTGTGGAGGACTTCCAGGGAGGAAATAAAATTGAAGTTAATAAAA
ATCAATTTGCTCTAATTGAAGGAAAAAACAAAACTGTAAGTACCCTTGTTATCCA
AGCGGCAAATGTGTCAGCTTTGTACAAATGTGAAGCGGTCAACAAAGTCGGGA
GAGGAGAGAGGGTGATCTCCTTCCACGTGACCAGGGGTCCTGAAATTACTTTG
CAACCTGACATGCAGCCCACTGAGCAGGAGAGCGTGTCTTTGTGGTGCACTGC
AGACAGATCTACGTTTGAGAACCTCACATGGTACAAGCTTGGCCCACAGCCTCT
GCCAATCCATGTGGGAGAGTTGCCCACACCTGTTTGCAAGAACTTGGATACTCT
TTGGAAATTGAATGCCACCATGTTCTCTAATAGCACAAATGACATTTTGATCATG
GAGCTTAAGAATGCATCCTTGCAGGACCAAGGAGACTATGTCTGCCTTGCTCAA
GACAGGAAGACCAAGAAAAGACATTGCGTGGTCAGGCAGCTCACAGTCCTAGA
GCGTGTGGCACCCACGATCACAGGAAACCTGGAGAATCAGACGACAAGTATTG
GGGAAAGCATCGAAGTCTCATGCACGGCATCTGGGAATCCCCCTCCACAGATC
ATGTGGTTTAAAGATAATGAGACCCTTGTAGAAGACTCAGGCATTGTATTGAAG
GATGGGAACCGGAACCTCACTATCCGCAGAGTGAGGAAGGAGGACGAAGGCC
TCTACACCTGCCAGGCATGCAGTGTTCTTGGCTGTGCAAAAGTGGAGGCATTTT
TCATAATAGAAGGTGCCCAGGAAAAGACGAACTTGGAAATCATTATTCTAGTAG
GCACGGCGGTGATTGCCATGTTCTTCTGGCTACTTCTTGTCATCATCCTACGGA
CCGTTAAGCGGGCCAATGGAGGGGAACTGAAGACAGGGTACCTGTCCATCGT

FIG. 1A

CATGGACCCAGATGAACTCCCATTGGATGAACATTGTGAACGACTGCCTTATGA
TGCCAGCAAATGGGAATTCCCCAGAGACCGGCTGAAGCTAGGTAAGCCTCTTG
GCCGTGGTGCCTTTGGCCAAGTGATTGAAGCAGATGCCTTTGGAATTGACAAG
ACAGCAACTTGCAGGACAGTAGCAGTCAAAATGTTGAAAGAAGGAGCAACACA
CAGTGAGCATCGAGCTCTCATGTCTGAACTCAAGATCCTCATTCATATTGGTCA
CCATCTCAATGTGGTCAACCTTCTAGGTGCCTGTACCAAGCCAGGAGGGCCAC
TCATGGTGATTGTGGAATTCTGCAAATTTGGAAACCTGTCCACTTACCTGAGGA
GCAAGAGAAATGAATTTGTCCCCTACAAGACCAAAGGGGCACGATTCCGTCAA
GGGAAAGACTACGTTGGAGCAATCCCTGTGGATCTGAAACGGCGCTTGGACAG
CATCACCAGTAGCCAGAGCTCAGCCAGCTCTGGATTTGTGGAGGAGAAGTCCC
TCAGTGATGTAGAAGAAGAGGAAGCTCCTGAAGATCTGTATAAGGACTTCCTG
ACCTTGGAGCATCTCATCTGTTACAGCTTCCAAGTGGCTAAGGGCATGGAGTTC
TTGGCATCGCGAAAGTGTATCCACAGGGACCTGGCGGCACGAAATATCCTCTT
ATCGGAGAAGAACGTGGTTAAAATCTGTGACTTTGGCTTGGCCCGGGATATTTA
TAAAGATCCAGATTATGTCAGAAAAGGAGATGCTCGCCTCCCTTTGAAATGGAT
GGCCCCAGAAACAATTTTTGACAGAGTGTACACAATCCAGAGTGACGTCTGGT
CTTTTGGTGTTTTGCTGTGGGAAATATTTTCCTTAGGTGCTTCTCCATATCCTGG
GGTAAAGATTGATGAAGAATTTTGTAGGCGATTGAAAGAAGGAACTAGAATGA
GGGCCCCTGATTATACTACACCAGAAATGTACCAGACCATGCTGGACTGCTGG
CACGGGGAGCCCAGTCAGAGACCCACGTTTTCAGAGTTGGTGGAACATTTGGG
AAATCTCTTGCAAGCTAATGCTCAGCAGGATGGCAAAGACTACATTGTTCTTCC
GATATCAGAGACTTTGAGCATGGAAGAGGATTCTGGACTCTCTCTGCCTACCTC
ACCTGTTTCCTGTATGGAGGAGGAGGAAGTATGTGACCCCAAATTCCATTATGA
CAACACAGCAGGAATCAGTCAGTATCTGCAGAACAGTAAGCGAAAGAGCCGGC
CTGTGAGTGTAAAAACATTTGAAGATATCCCGTTAGAAGAACCAGAAGTAAAAG
TAATCCCAGATGACAACCAGACGGACAGTGGTATGGTTCTTGCCTCAGAAGAG
CTGAAAACTTTGGAAGACAGAACCAAATTATCTCCATCTTTTGGTGGAATGGTG
CCCAGCAAAAGCAGGGAGTCTGTGGCATCTGAAGGCTCAAACCAGACAAGCG
GCTACCAGTCCGGATATCACTCCGATGACACAGACACCACCGTGTACTCCAGT
GAGGAAGCAGAACTTTTAAAGCTGATAGAGATTGGAGTGCAAACCGGTAGCAC
AGCCCAGATTCTCCAGCCTGACTCGGGGACCACACTGAGCTCTCCTCCTGTTTA
A (SEQ ID NO:1)

FIG. 1B

MESKVLLAVALWLCVETRAASVGLPSVSLDLPRLSIQKDILTIKANTTLQTTCRGQR
DLDWLWPNNQSGSEQRVEVTECSDGLFCKTLTIPKVIGNDTGAYKCFYRETDLAS
VIYVYVQDYRSPFIASVSDQHGVVYIIENKNKTVVIPCLGSISNLNVSLCARYPEKR
FVPDGNRISWDSKKGFIIPSYMISYAGMVFCEAKINDESYQSIMYIVVVVGYRIYDV
VLSPSHGIELSVGEKLVLNCTARTELNVGIDFNWEYPSSKHQHKKLVNRDLKTQS
GSEMKKFLSTLTIDGVTRSDQGLYTCAASSGLMTKKNSTFVRVHEKPFVAFGSGM
ESLVEATVGERVRIPAKYLGYPPPEIKWYKNGIPLESNHTIKAGHVLTIMEVSERDT
GNYTVILTNPISKEKQSHVVSLVVYVPPQIGEKSLISPVDSYQYGTTQTLTCTVYAIP
PPHHIHWYWQLEEECANEPSQAVSVTNPYPCEEWRSVEDFQGGNKIEVNKNQFA
LIEGKNKTVSTLVLQAANVSALYKCEAVNKVGRGERVISFHVTRGPETTLQPDMQP
TEQESVSLWCTADRSTFENLTWYKLGPQPLPIHVGELPTPVCKNLDTLWKLNATM
FSNSTNDILIMELKNASLQDQGDTVCLAQDRKTKKRHCVVRQLTVLERVAPTTTGN
LENQTTSIGESIEVSCTASGNPPPQIMWFKDNETLVEDSGIVLKDGNRNLTIRRVRK
EDEGLYTCQACSVLGCAKVEAFFIIEGAQEKTNLEIIILVGTAVIAMFFWLLLVIILRT
VKRANGGELKTGYLSIVMDPDELPLDEHCERLPYDASKWEFPRDRLKLGKPLGRG
AFGQVIEADAFGIDKTATCRTVAVKMLKEGATHSEHRALMSELKILIHIGHHLNVV
NLLGACTKPGGPLMVIVEFCKFGNLSTYLRSKRNEFVPYKTKGARFRQGKDYVG
AIPVDLKRRLDSITSSQSSASSGFVEEKSLSDVEEEEAPEDLYKDFLTLEHLICYSFQ
VAKGMEFLASRKCIHRDLAARNILLSEKNVVKICDFGLARDIYKDPDYVRKGDAR
LPLKWMAPETIFDRVYTIQSDVWSFGVLLWEIFSLGASPYPGVKIDEEFCRRLKEGT
RMRAPDYTTPEMYQTMLDCWHGEPSQRPTFFSELVEHLGNLLQANAQQDGKDYIVL
PISETLSMEEDSGLSLPTSPVSCMEEEEVCDPKFHYDNTAGISQYLQNSKRKSRPVS
VKTFEDIPLEEPEVKVIPDDNQTDSGMVLASEELKTLEDRTKLSPSFGGMVPSKSRE
SVASEGSNQTSGYQSGYHSDDTDTTVYSSEEAELLKLIEIGVQTGSTAQILQPDSGT
TLSSPPV (SEQ ID NO:2)

FIG.2

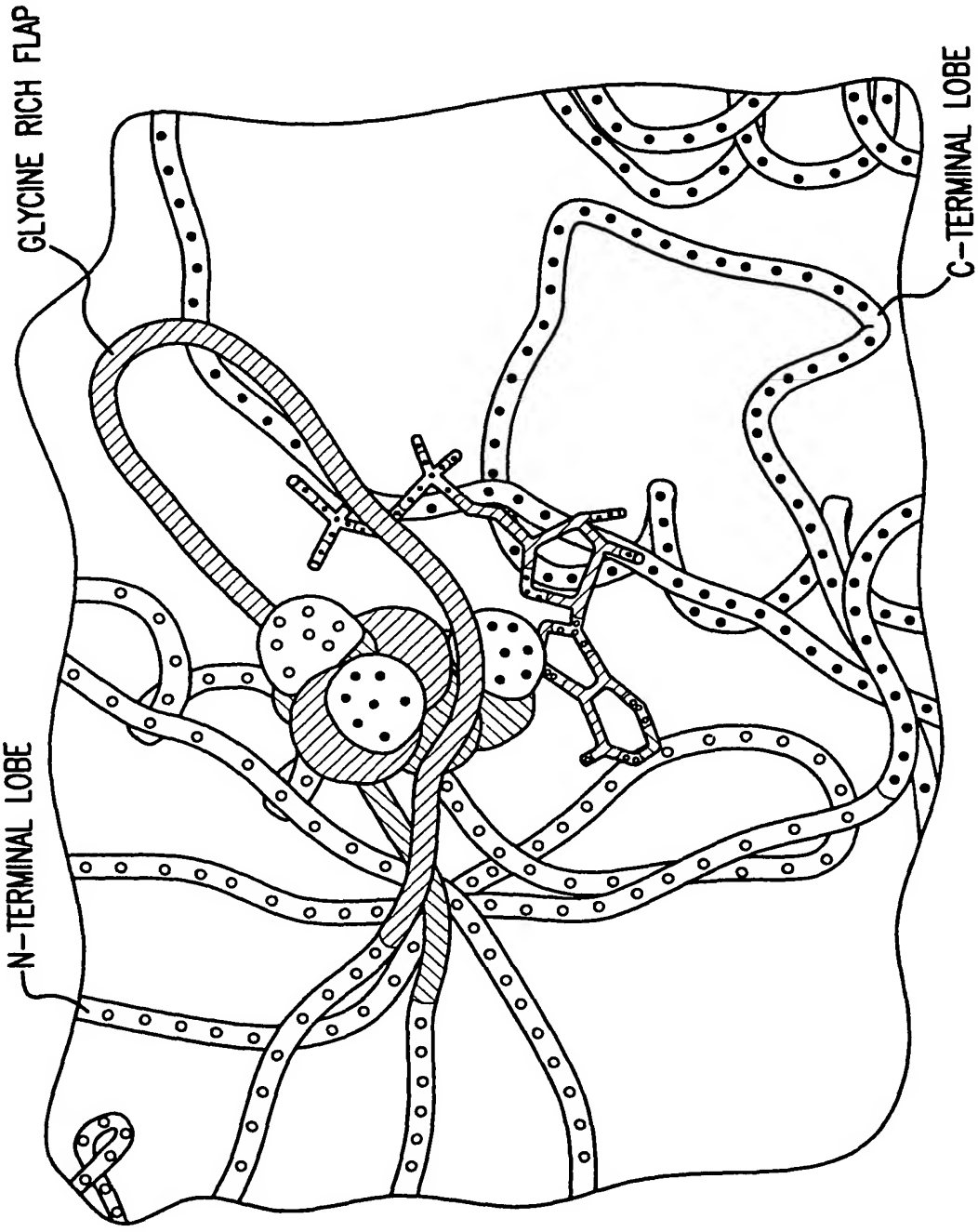

FIG.3A

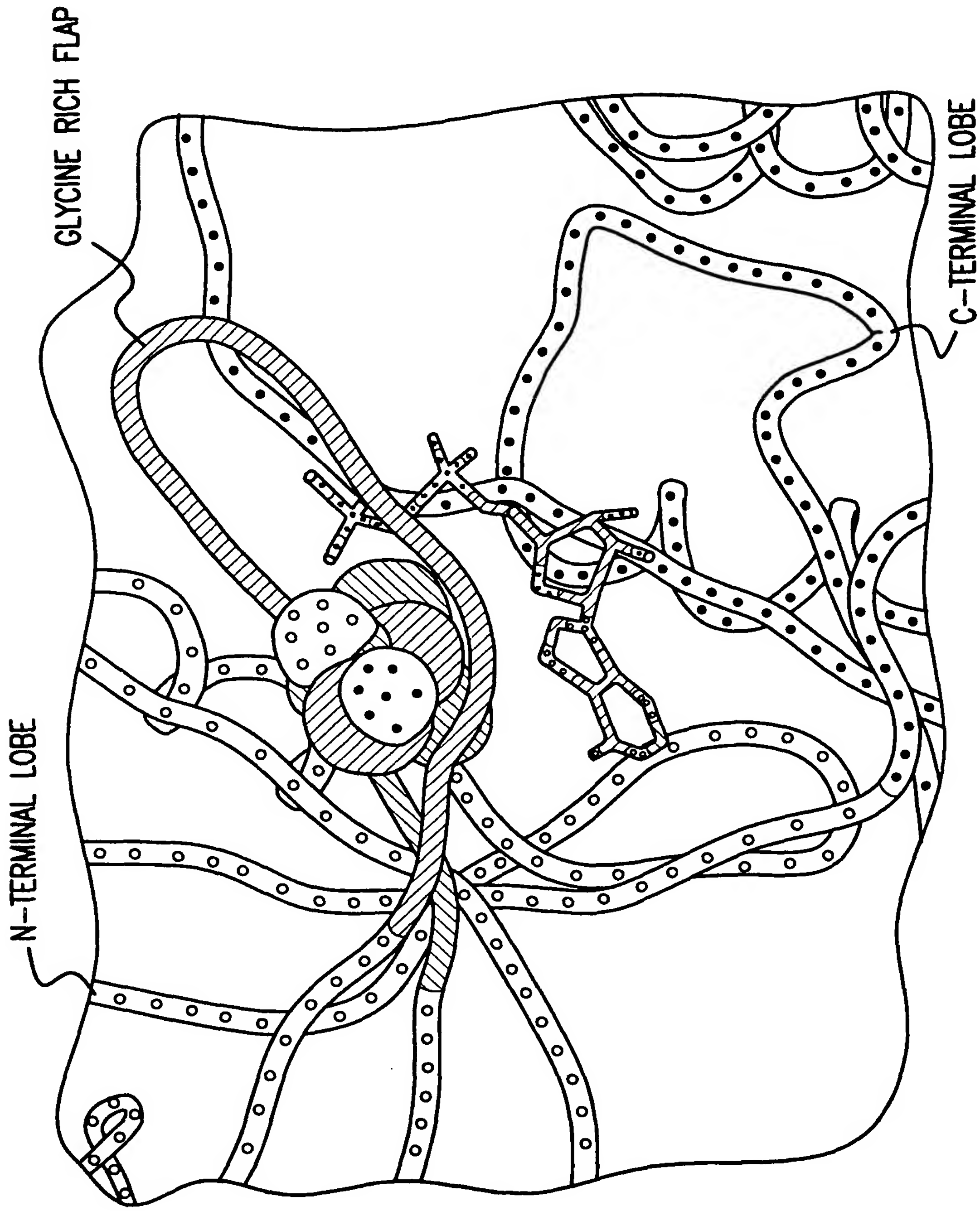

FIG.3B

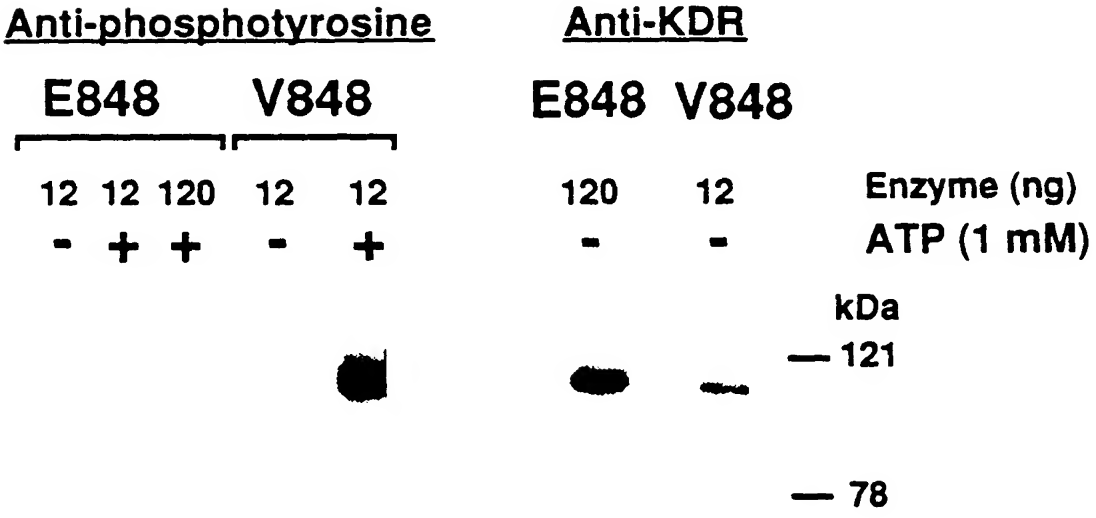
Anti-phosphotyrosine
E848
V848
12 12 120 12 12
- + + - +
Anti-KDR
E848 V848
120 12
- -
Enzyme (ng)
ATP (1 mM)
kDa
121
78

FIG.4A FIG.4B